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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/728,904	12/08/2003	Haru Ando	GOTO.0008	9309
38327	7590	02/25/2008		
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EXAMINER				
MUSSELMAN, TIMOTHY A				
ART UNIT		PAPER NUMBER		
3714				
MAIL DATE		DELIVERY MODE		
02/25/2008		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/728,904

Applicant(s)

ANDO ET AL.

Examiner

TIMOTHY MUSSELMAN

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Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 4-8 and 12-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 4-8 and 12-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.1114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/22/2007 has been entered, and claims 4-9, and 12-19 are pending. Claims 1-3 and 9-11 have been cancelled.

Claim Rejections - 35 USC § 101

The following is a quotation of 35 U.S.C. 101:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 19 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 19 is explicitly defined as a software program. Although applicant claims the program as being embedded in a computer readable medium, the claim is still for a *software program* embedded in a computer readable medium. In order to be statutory subject matter, the data structure on the computer readable medium must be described as linked to a system wherein the structural and functional interrelationships between the data structure and other claimed aspects of the invention are capable of being realized. See, e.g. Warner, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory). One example of an acceptable manner in which to describe applicant's claim would be "a computer readable medium containing a software program, operable when executed by a computer to...". See MPEP 2106.

Claim Rejections - 35 USC § 103

The following is a quotation of the relevant portion of 35 U.S.C. 103 that forms the basis for the rejections made in this section of the office action;

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

Claims 4-6 and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Norcott et al. (US 6,775,518) in view of Morton et al. (US 2005/216443).

Regarding claims 4 and 12, Norcott discloses an information management server to distribute lecture material to a student terminal networked with said student terminal and an instructor terminal. See col. 4: 26-43 and col. 7: line 1. Norcott further discloses an accumulator section to accumulate electronic data on said lecture contents. See col. 2: 62-65, and note that the 'content media storage' is analogous to an accumulator section. Norcott further discloses a holding section to hold lecture-related information relating to the lecture contents. See col. 2: 62-65, and note that the 'test database' is analogous to a holding section for lecture related information, because the tests are related to the lectures (see col. 3: 19-22).

Norcott further discloses a send section to send said lecture contents and said lecture-related information to said student terminal. See col. 4: 26-30. Norcott further discloses an analyzer section to analyze electronic data on said lecture contents, and a matcher section to link said lecture-related information with said lecture contents based on said analysis results. See col. 6: 5-10. Norcott further discloses a control section for selecting lecture contents linked to said lecture related information based on a reply to said lecture-related contents sent from said student terminal. See col. 6: 32-47. Norcott further discloses a

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matching section for matching relevant portions of the lecture content with the lecture related information and supplying this remedial content to the student based on their replies to the lecture related information (i.e. remedial information is supplied based on the students answers to questions). See col. 6: 26-46.

Norcott further discloses wherein the matched lecture content can be in the form of digital video or audio (see col. 6: 13-14). Norcott is silent as to how, specifically, the remedial lecture content is selected, and specifically fails to teach of an analyzer for extracting text information and/or drawing information from video information contained in said lecture contents, and for extracting text information from audio or video information contained in said lecture contents, time stamping the extracted information by sentence and by drawing. However, Morton discloses a system for extracting searchable information from media files that includes this feature. See paragraphs 0019 and 0059. Note that the searchable index constitutes information *extracted* from the media file. Also note that Morton teaches in paragraph 0028 the concept of time stamping the relevant returned media intervals. This is also clearly illustrated in fig. 7, label 330.

Norcott further discloses in paragraph 0078 that the intervals can be grouped by specific sentences or visual objects. It is described in paragraphs 0189 and 0190 that the visual objects can be background information in the video scene. The example presented in this citation describes wherein the background information can be information extracted from slides during a lecture, and it is reasonably well known that lecture slides often contain drawings, and in fact, could be interpreted as drawings in and of themselves. Since Norcott discloses the remedial lecture presentations, and Norcott discloses searching media files specifically for use with educational systems and the presentation of remedial material (see paragraph 0019), it would have been obvious to one of ordinary skill in the art at the time of the invention to combine these teachings, since doing so would merely be fulfilling the intended use of the invention of Morton by utilizing it with a standard CBT system such as Norcott.

Regarding claims 5 and 13, Norcott further discloses wherein said send section sends practice problems relating to said lecture contents as said lecture-related information, and said control section selects lecture contents linked with said practice problems based on true-false judgment results of replies to said practice problems sent from said student terminal. See col. 6: 22-46.

Regarding claims 6 and 14, Norcott/Morton disclose wherein said control section edits the video information contained in said selected lecture contents, and creates supplemental learning contents to send to said student terminal, as described above regarding claims 4 and 12, because the provided segment is thus a sub-portion *edited from* of the whole.

Claims 7-8 and 15-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Norcott et al. (US 6,775,518) in view of Morton et al. (US 2005/216443) and in further view of Remschel (US 6,411,796).

Regarding claims 7-8, 15-16, and 19, Norcott/Morton fail to teach of a grouping section for sorting students into groups based on replies to said lecture-related information. However, Remschel discloses a networked educational system that includes this feature. See col. 8: 10-20.

Regarding claims 17 and 18, Norcott/Morton fail to teach wherein said instructor terminal displays said grouping of said sorted students, and wherein said instructor terminal controls communication to students sorted into the same groups according to the particular group. However, Remschel teaches of these features in col. 8: 41-55 and fig.

Regarding claim 19, Norcott/Morton fail to teach of grouping students. However, Remschel discloses a program embedded in a computer readable medium for displaying students sorted into groups to receive information based on success pertaining to previous assignments. See col. 8: 10-17, and note that applicants claimed limitation of 'identical wrong replies' is reasonably encompassed within the phrase 'success on prior assignments'. It is true that Remshel does not *explicitly* define that the 'success on prior assignments' comprises *identical* wrong answers. However, since the remedial information is presented to the students based on prior success (or lack thereof), and the students are grouped so that the

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students who need the same information will see the same presentation (i.e. because they shared some prior success or lack thereof on the prior assignment), it would have been obvious to one of ordinary skill in the art to consider a lack of success as pertaining to at least some identical wrong answers to questions, because questioning students to test their knowledge is extremely old and well known in the art, and is used in almost every educational system available (quizzes, exams, etc.).

Remschel further discloses a module for displaying information to be specified by one of the students and a respective student terminal display screen. See col. 16: 10-19. Note that the information on the screen at the time the teacher took over operation of the student's computer would be 'specified by the student'.

Remschel further discloses displaying the learning progress status of said student. See col. 15: 3-20.

Remschel further discloses wherein lecture contents are distributed over a network to a server for distributing lecture contents from the instructor terminal to the students of a particular group. See col. 8: 45-58. Remschel fails to teach wherein the lecture contents are supplemental. However, Norcott discloses a distributed educational system that includes this feature. See col. 6: 40-45. The use of this concept in the system of Remschel would merely be an obvious combination of elements known in the art of computer based training systems to one of ordinary skill in the art, because there would be no unexpected results by nature of this combination, as the remedial information concept would work identically in the system of Remschel as it does in Norcott.

All of the additional features beyond what is described in this paragraph are rejected as being obvious over Norcott in view of Morton as described above with regard to claim 12.

Response to Arguments

Applicant's arguments dated 10/2/2007 have been fully considered, and are not persuasive. Applicant argues that Morton does not time index media material per sentence or drawing. However, Morton discloses a system for extracting searchable information from media files that includes this feature. See paragraphs 0019 and 0059. Note that the searchable index constitutes information *extracted* from the

media file. Also note that Morton teaches in paragraph 0028 the concept of time stamping the relevant returned media intervals. This is also clearly illustrated in fig. 7, label 330. Norcott further discloses in paragraph 0078 that the intervals can be grouped by specific sentences or visual objects. It is described in paragraphs 0189 and 0190 that the visual objects can be background information in the video scene. The example presented in this citation describes wherein the background information can be information extracted from slides during a lecture, and it is reasonably well known that lecture slides often contain drawings, and in fact, could be interpreted as drawings in and of themselves. Note also that Norcott searches the media files for proper intervals based specifically on the frequency of appearance of certain words. See paragraphs 0060 and 0061. In fact, that is precisely the meaning of the term 'relevance intervals' in the system of Morton i.e. intervals of the media which are relevant to specific words.

Examiner acknowledges that Remschel does not disclose grouping students based on identical wrong replies. However, since the information is presented to the students based on prior success (or lack thereof) col 8: 10-17, and the students are grouped so that the students who need the same information will see the same presentation (i.e. because they shared some prior success or lack thereof on the prior assignment), it would have been obvious to one of ordinary skill in the art to consider a lack of success as pertaining to at least some identical wrong answers to questions, because questioning students to test their knowledge is extremely old and well known in the art, and is used in almost every educational system available, including at least the system of Norcott (quizzes, exams, etc.). Examiner is of the contention that since the function of the groupings are the same in the Remschel system and the instant invention (grouping students who need to receive the same content), the additional limitation of 'identical wrong replies', while not anticipated by Remschel, is a rather trivial obvious variation thereof, since correct/incorrect replies are such a common factor used to determine success on assignments.

Regarding applicant's assertion that examiner has merely combined 'bits and pieces' of the prior art, examiner contends that while this is true strictly speaking, it is important to note that 35 U.S.C. 103 allows

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for the rejection of claims based on obvious combinations of prior art references. The combination of Norcott with Morton is valid, because Norcott discloses a CBT system that searches for and provides adaptive remedial content to students in the form of video/audio data. Morton is specifically tailored to provide such content from multimedia files, and in fact even mentions in paragraph 0019 that is ideal for use in E-learning environments, reinforcing that this combination is valid and obvious. The combination of Remschel with Norcott is valid because the features combined work the same in either reference. That is to say that there is no inventive step involved, because it is merely a combination of elements known in the art of computer education. Sorting students in groups would function exactly the same in the system of Norcott as Remschel. Thus, this combination is valid.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TIMOTHY MUSSELMAN whose telephone number is (571)272-1814. The examiner can normally be reached on Mon-Thu 6:00AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pezzuto can be reached on (571)272-6996. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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